inoculated appeared to be more or less susceptible to the pink root organism, but other liliaceous plants, such as *Funkia*, *Tulipa*, *Calla*, *Iris*, and *Lilium* were immune. Pink root of onions has been observed in California, Iowa, Wisconsin, New York, and the Bermuda Islands. In Texas it seriously threatens the industry of growing onions for the early northern markets, which industry has become an important one. Losses vary from $150 to $400 per acre.

Symptoms of pink root include yellowing of the roots, followed by their pink discoloration, drying, and death. The bulb exhausts its energy in producing new roots. Alkali soil, deficiency in nitrogen and humus, excessive temperatures, eel worm and thrips attacks are factors favoring the disease. The seed is not a carrier, but onion "sets," both dry and green, may harbor the causal fungus. Suggested control methods include the use of virgin soil for seed bed and field plantings, steam or formaldehyde disinfection of seed beds known to contain the pink root fungus, rotation of crops, the use of quickly acting fertilizers, careful use of tools, and various cultural practices favoring continued growth of the crop. An attempt to control nematodes by adding cyanimide to the soil failed because the amount required to affect nematodes killed the crop.—J. G. BROWN.

Carbon nutrition.—Storage rot fungi of the sweet potato have been investigated by WEIMER and HARTER,[6] who find that seven of eight species causing rot can utilize glucose as a source of carbon. Five of them are able to increase the acidity of the culture medium, and certain species increased the osmotic concentration of the substratum. The glucose is utilized partly as a source of energy, partly in producing mycelium, and perhaps in still other ways. The respiratory activity of these organisms has been studied by the same authors,[7] who used the amount of CO_2 set free as the measure of the carbohydrate used in this process. *Penicillium* sp., *Botrytis cinerea*, and *Sclerotium bataticola* grew slowly, produced relatively large amounts of dry material, consumed nearly all of the glucose, and produced CO_2 most freely. The other species grew more rapidly, but produced comparatively small amounts of CO_2 and did not consume all the glucose. The economic coefficient was found unusually high in two species. *Fusarium acuminatum* required 17.11 G. and *Mucor racemosus* 22.86 G. glucose for each gram of dry matter grown. The CO_2 set free is not equal to the theoretical amount that could have formed from the sugar consumed. Some of the sugar evidently was not completely respired, as alcohol and acids appeared in some of the culture solutions.—C. A. SHULL.

Transmission of potato wilts.—Among the various wilts which are responsible for heavy losses sustained by potato growers are those due to attacks of

[6] WEIMER, J. L., and HARTER, L. L., Glucose as a source of carbon for certain sweet potato storage rot fungi. Jour. Agric. Res. **21**: 189–210. 1921.

[7] ———, Respiration of sweet potato storage rot fungi when grown on a nutrient solution. Jour. Agric. Res. **21**: 211–226. 1921.